June 16, 2010

Via ECFS

Ms. Marline H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: Notice of Ex Parte Communication – CG Docket No. 09-158, CC Docket No. 98-170, WC Docket No. 04-36

Dear Ms. Dortch:

This is to inform you that Mr. Kent Johnson, Inside Sales Representative and Mr. Tom Tavares, Solutions Architect of Empirix, Inc. and I met yesterday with Jordan Usdan of the Commission's Office of Strategic Planning and Walter Johnston and James Miller of the Commission's Office of Engineering and Technology. During this meeting, Empirix discussed the importance of service quality monitoring for ensuring quality mobile broadband service and Empirix's capabilities to conduct performance measurement and service quality monitoring of mobile broadband connections. Empirix highlighted the role that service quality plays in ensuring a quality user experience for real-time applications over mobile connections and the network-based tools available to service providers for service quality monitoring.

Pursuant to Section 1.1206(b) of the Commission's rules, this letter and the attached presentation given by Empirix is being filed electronically in the above-referenced proceeding.

Sincerely,

Ryan S. Bowley

cc: Jordan Usdan

Walter Johnston
James Miller

empirix

When Quality Matters™

Service Quality Monitoring and Broadband Policy

Company Overview

Empirix leads the market in service quality assurance solutions for new IP communications

- Global headquarters Bedford, MA
- Regional headquarters in Europe (UK) and Asia (Japan)
- 280 employees worldwide serving multi-national customer base
- Industry pioneer, originally as Hammer Technologies, founded 1992
- All of the world's top ten Network Equipment Manufacturers and 90% of top Service Providers use Empirix solutions

Broadband User Experience: It's Not Just Speed

- Bandwidth/speed is important, but network problems can cause problems over even the fastest connections
  - Latency: Information is late
  - Jitter: Information is garbled
  - Packet Loss: Information Is lost

Latency

Jitter

Lost
Packets

FCC: Demanding Applications Demand a Quality Network

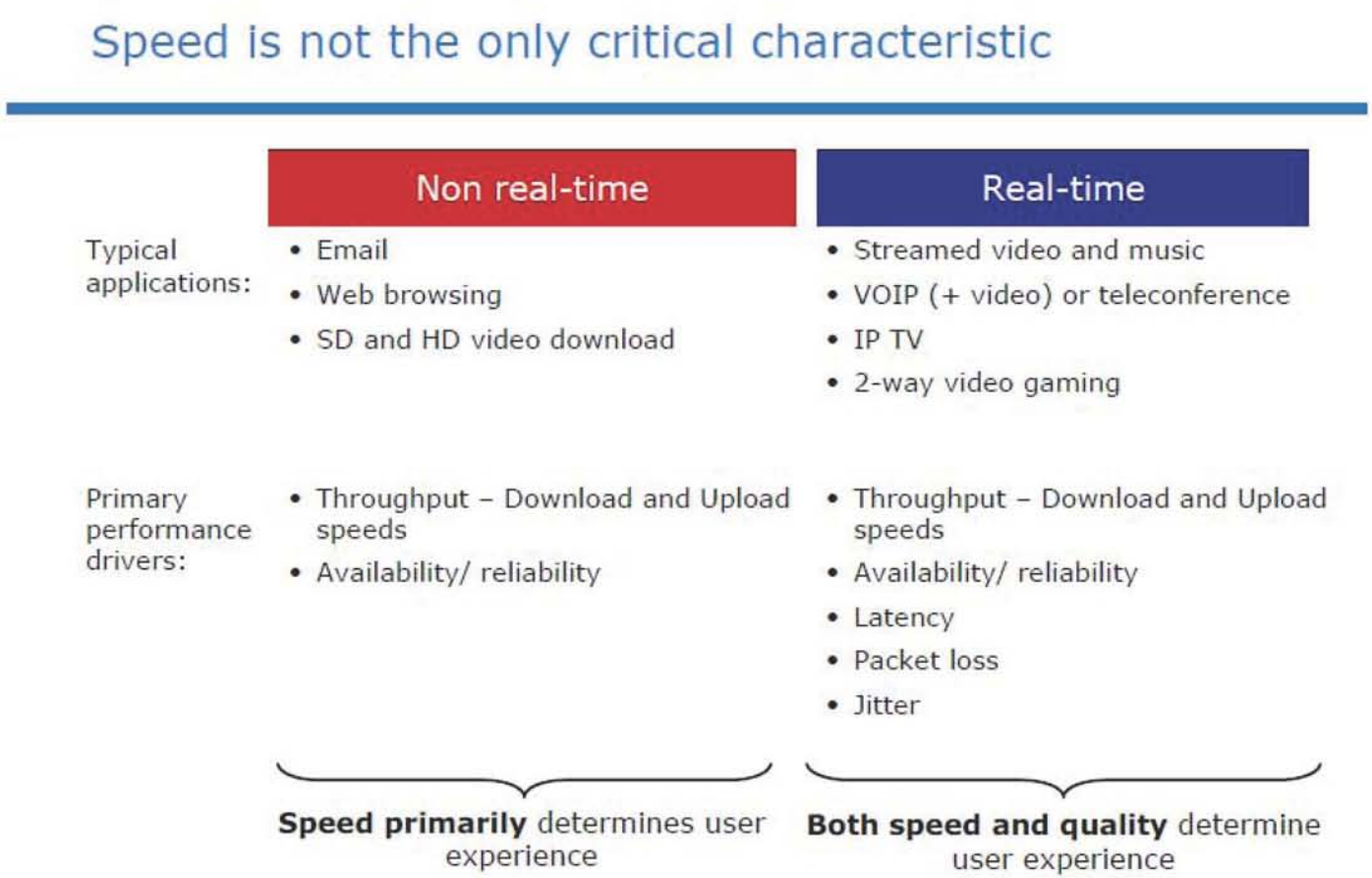
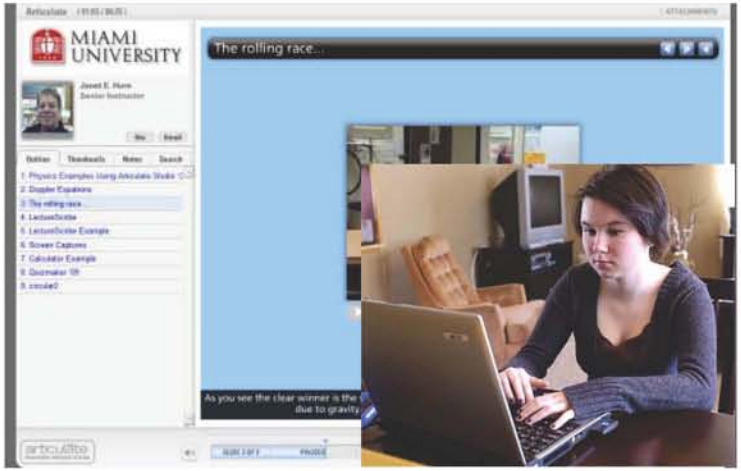


Illustration Source: Federal Communications Commission, Status of the Commission's Processes for Development of a National Broadband Plan, September 29, 2009; http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf

As Broadband Becomes a Bigger Part of Our Lives, Need for Quality Service Increases

Students Miss Parts of a Lecture



Doctor's Orders are Not Clear

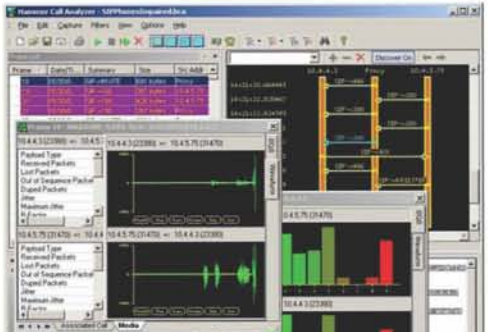
Other Examples:

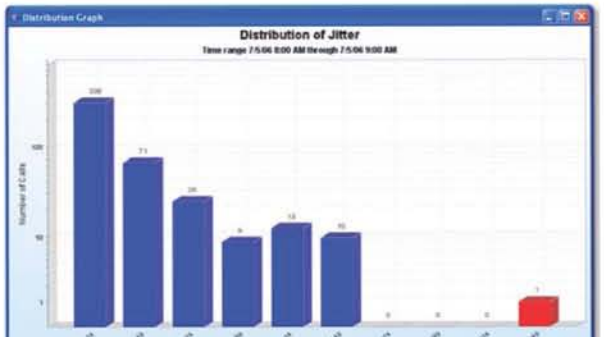
- 911 Calls Don't Get Through
- Full-Network Degradation in Time of Emergency

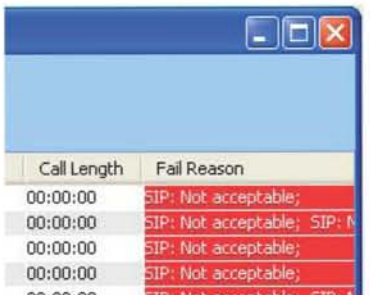
Need to Focus on People and How They Use Broadband Instead of Just Broadband

Empirix –
Solutions to Maintain Service Quality

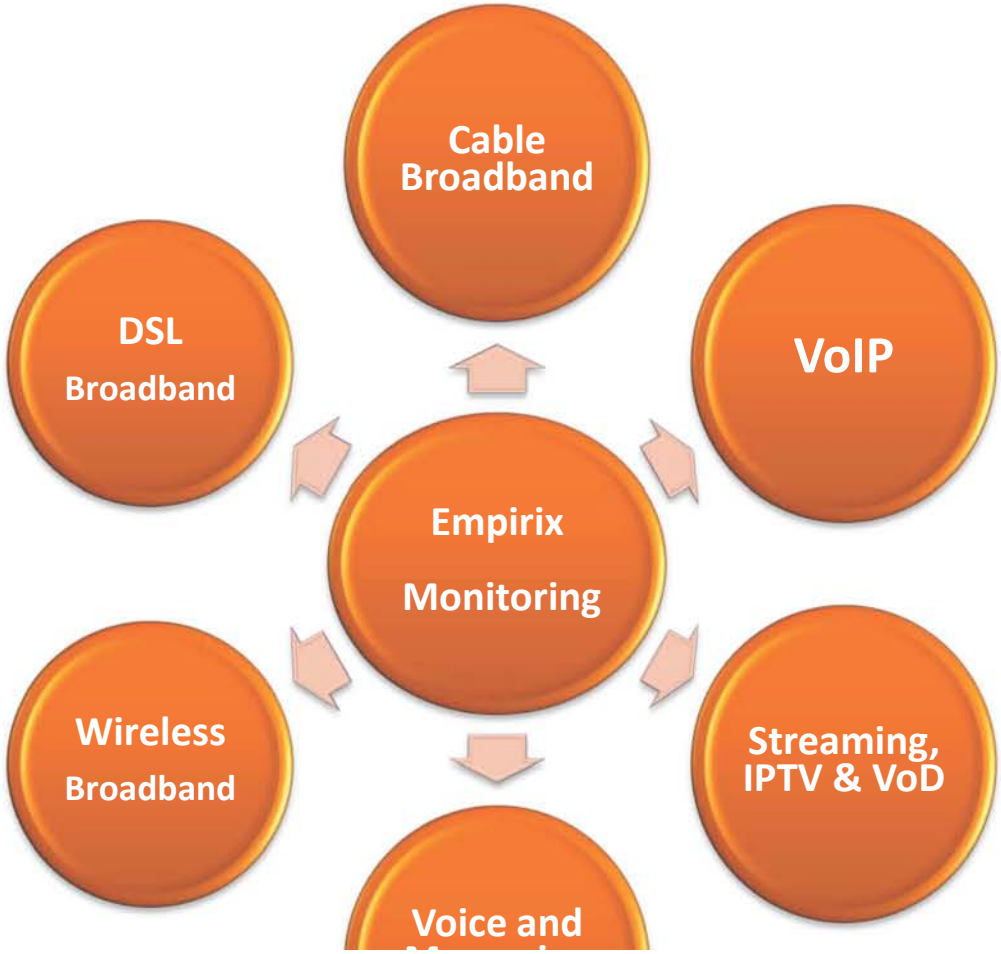
- Empirix is the industry leader in developing, manufacturing, and distributing service quality monitoring tools to telecommunications service providers
- Tools monitor traffic running through a provider's network on a 24/7 basis and importantly, monitor traffic on a end to end basis to provide a complete picture of how services are delivered to consumers.
- Real-time and Historical data to provide critical views to help providers:
  - Identify failed connections
  - Identify and remedy connection and voice (VoIP) quality problems
  - Recognize resource constraints leading to service degradation
  - Perform failure analysis and provide both proactive and reactive network monitoring



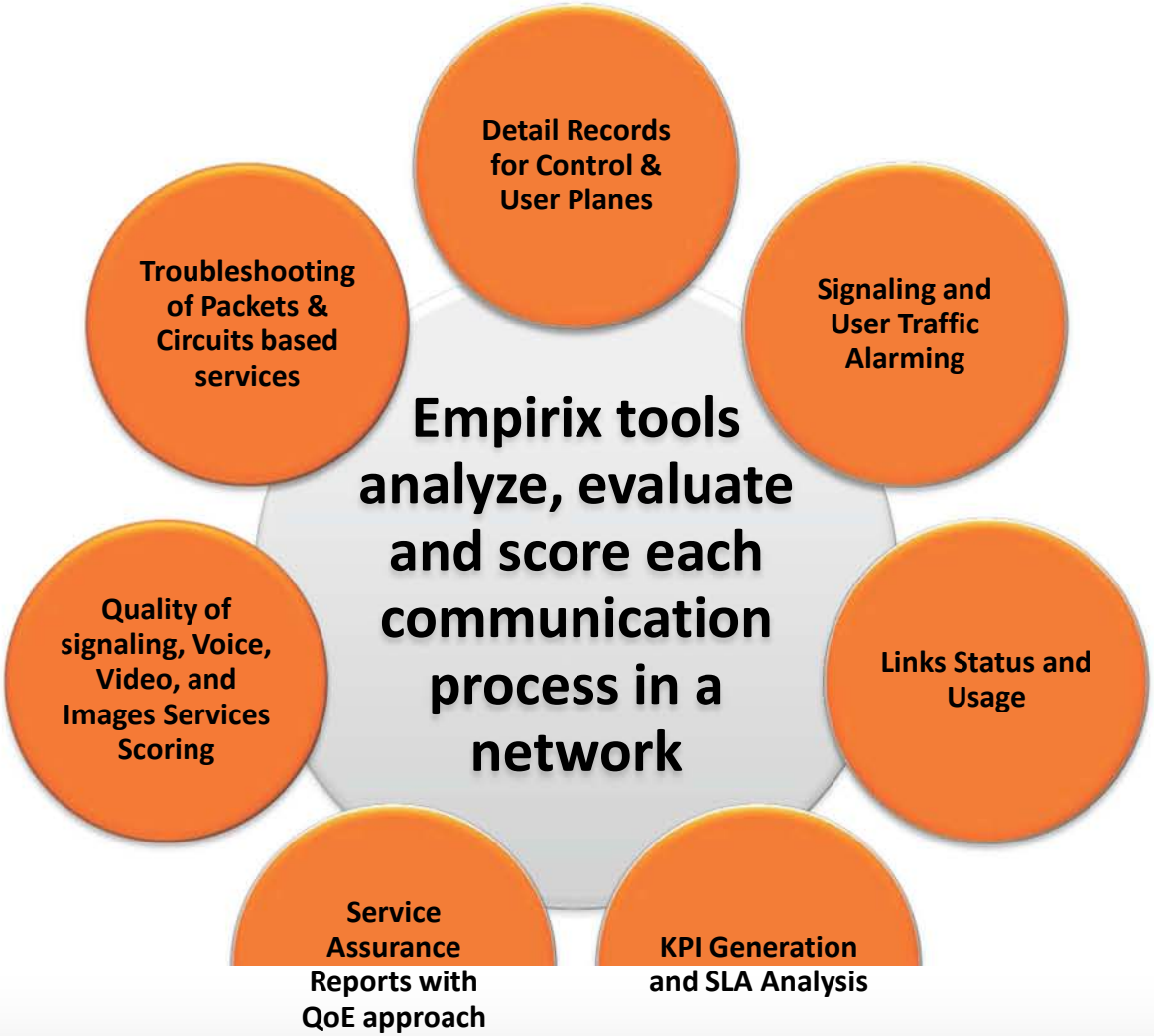




Empirix monitoring solutions cover multiple technologies



Empirix provides critical information



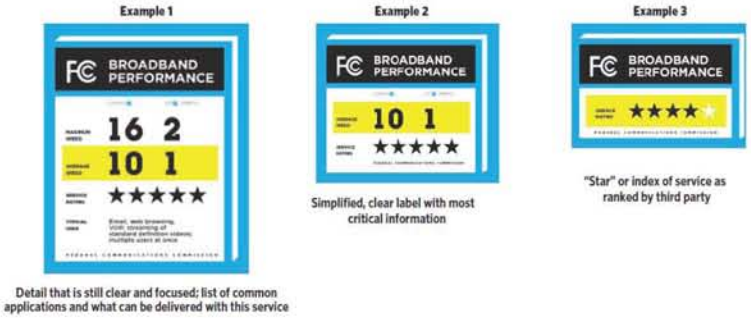
Policy Challenges

- Lack of Overall Focus on Service Quality
  - Congress and FCC are more focused on speed and access
- Ensuring that Service Quality is Part of Future Funding Programs
  - Maintaining Service Quality is Key to Taxpayer Return on Investment

FCC: Broadband Performance

- US Broadband Performance Panel Project with UK firm “SamKnows”
  - Selected Individuals – 10,000
  - Requires in-home hardware installation
  - Focused on speed, but does consider jitter and latency, and packet loss
  - More for data collection than as a tool for service providers and customers

- Later in 2010, FCC will initiate a NPRM to determine performance disclosure requirements focused on:
  - Development of an online decision-making tool for choosing a broadband service provider
  - Development of a broadband digital label summarizing performance (Broadband Internet Star Program)



Focus Should be User Experience-Based and Address Factors that Impact Applications that Customers will Use

Service Quality Standards: Recommendations

- Need “end to end” network service assurance
  - Signaling and Media on for every customer call – 24/7/365
- Must include Customer Experience (QoE) metrics
  - Quality assessment for entire network, end to end
  - Media monitoring of each call leg of the connection
- Alarming is necessary to avoid large scale loss of service
  - Significant infrastructure protection benefits

Benefits of
Service Quality Tools to Service Providers

- Large providers are investing significant dollars into tools to ensure the quality of their broadband connections

- Service quality tools give providers the ability to:
  - Proactively troubleshoot
  - Reduce costs
  - Resolve problems more quickly
  - Increase customer satisfaction, decrease customer churn
- ROI from installation of service quality tools: over 300%
- Despite these benefits, smaller providers, who generally serve some of the more difficult to serve populations, face challenges incorporating service quality into their broadband deployment plans
  - Don’t recognize value
  - Competes with high cost of providing service

As Federal Support for Broadband Grows, Service Quality Tools Help Ensure Taxpayer ROI

- ARRA represented first significant federal investment in broadband deployment
- FCC's National Broadband Plan calls for a $20 billion investment to meet target of 4Mbps connections in every house
  - acceptable quality of service for the most common interactive applications
- Even with initial federal funding for infrastructure, broadband service providers must obtain and maintain customers over the long haul
- Without tools to ensure a quality customer experience, customers are likely to cancel service (customer churn)
- If funding recipients/service providers are not encourage/required to obtain service quality tools, this significant taxpayer investment is at risk

Congress and the FCC Should Provide Service Providers with the Resources to Obtain Service Quality Tools

Way Forward

- Empirix has applied for funding under ARRA's Broadband Program to Deploy Service Quality Monitoring Tools to 100 service providers around the country
  - Focus on ARRA recipients and providers in low-income areas, including tribes
- Continued Education of Policy Makers in Congress about the importance of service quality to the broadband user experience
- Seeking provisions in future USF reform legislation/regulations that will provide either direct support for service quality tools or give providers direction towards their purchase as part of USF program conditions